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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Harsch Khandelwal; Michael Blackburn; Paul Hoskins; Gregory Alexanian	Confirmation No.	8049
Serial No.:	10/615,211		
Filed:	July 7, 2003	Customer No.:	28863
Examiner:	Unknown		
Group Art Unit:	2182		
Docket No.:	1028-023US01		
Title:	SYSTEM AND METHOD FOR THE CAPTURE, STORAGE AND MANIPULATION OF REMOTE INFORMATION		

CERTIFICATE UNDER 37 CFR 1.8: I hereby certify that this correspondence is being deposited with the United States Post Service, as First Class Mail, in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450 on December 2, 2003.

By: Beth M. Lindblom
Name: Beth M. Lindblom

SUBMISSION OF CERTIFIED COPIES OF ORIGINAL FOREIGN APPLICATIONS

Commissioner for Patents
Alexandria, VA 22313-1450

Dear Sir:

This application claims priority under Title 35, United States Code, Section 119, to Canadian Application No. 2,406,808, filed on October 7, 2002 and Canadian Application No. 2,392,637, filed on July 5, 2002.

Certified copies of the above-identified earlier-filed Canadian applications are enclosed.

Date: December 2, 2003

By:

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Specification and Drawings, as originally filed, with Application for Patent Serial No: **2,406,808**, on October 7, 2002, by **nID SOLUTIONS INC. A DIVISION OF 2004221 ONTARIO LIMITED**, assignee of Harsch Khandelwal, Michael Blackburn, Paul Hoskins and Gregory Alexanian, for "System and Method for the Capture, Storage and Manipulation of Remote Information".

Agent certificateur/Certifying Officer

July 9, 2003
Date

Canada

(CIPO 68)
04-09-02

OPIC CIPO

Abstract of the Invention

A system and method for the capture, storage and manipulation of remote information is disclosed. The system includes at least one remote information capture device located at a remote site for capturing remote data, a central database accessible by the remote capture device for storing the captured remote data, and a computer program operative to manipulate the captured data. The method includes the steps of capturing remote data, storing the captured remote data, and manipulating the stored data.

System and Method for the Capture, Storage and Manipulation Of Remote Information

Field of the Invention

The present invention relates generally to data collection and manipulation methods and systems, and more particularly to a consumer information capture system and method.

Background of the Invention

With the growth over the years of age-restricted products such as lottery tickets, adult magazines, guns and ammunition, fireworks, condoms, smoking patches, medical supplies, alcohol, tobacco, vehicles, and rental movies, as well as age-restricted services such as gambling, movie theaters, and adult entertainment and licensed establishments, businesses and governmental agencies have had to develop policies to determine proof of age.

The use of driver licenses to serve as identification in various applications has grown over the years to include applications such as the purchase of alcohol, tobacco or lottery products, as well as for gambling in casinos, movie theaters, allowing ingress into licensed establishments. All of these applications have an age requirement for the purchase of a product at a point-of-transaction or for ingress into an establishment, and the driver license is the document used to provide age identification and all age verification is commonly accomplished in a relatively quick manner.

There are various forms of identification that are commonly accepted by businesses and government agencies as proof of age. The most convenient forms of identification are government issued documents such as

a driver's license, passport, social security card, voter's registration card, and immigration card. Another example of an identification document is a smart card that contains memory provided by an embedded integrated circuit. These documents provide personal information regarding the authorized bearer of the identification document in at least one machine-readable medium such as a barcode or magnetic stripe. Many identifying documents have more than one machine-readable medium for storing identifying information.

For example, a driver's license typically includes a photograph, printed textual information, and visible encoded information such as a barcode. In some cases a magnetic stripe provides a higher level of security and additional information regarding the bearer. For example, the information stored in the magnetic stripe of a driver's license may include identifying information about the authorized bearer, such as eye color, hair color, height, weight, and biometric patterns. The barcode and magnetic stripe may also include data related to ascertaining the age of the bearer. Alternatively, the above information may be stored in the memory of an embedded integrated circuit on a smart card.

There is also a need to authenticate the contents of a driver license, such as authenticating identification for credit card and check writing at point-of-sale. Further uses include authenticating driver licenses in police cars, ports of entry such as domestic and foreign airports, seaports, rail stations and border checkpoints, and points of entry to government/military buildings and other sensitive areas. Verifying identity is also important in other areas such as child day care centers and post offices to verify parcel pick-up and drop-off.

The problem of readily available fraudulent identification cards has cost many retailers fines, loss of tobacco and liquor vending licenses, and subjected them to other forms of civil and criminal liability. Over the years, various attempts have been made to prevent or detect the use of fake

identification cards, but without a great deal of success. To help prevent the use of fraudulent identification, government agencies have begun issuing new driver licenses with embedded code, or even encrypted coded information, with machine-readable formats that conform to industry/governmental standards.

Establishments wishing to avoid the sale of tobacco or alcohol to minors may check the photograph and date of birth printed on driver's licenses. However, the problem is that many youths and others have easy access to counterfeit identification. Accordingly, there is a need to confirm the correct age of a customer wishing to purchase alcohol, tobacco and other age-controlled products and services by reading encoded data on at least one machine readable medium.

More recent prior art identity verification methods and products involve services and data collection systems that include cumbersome and outdated equipment, if available at all, and often go unused since it is labor intensive to verify ID's. This equipment is typically non-user friendly and the equipment and manpower are typically underutilized resulting in a lack of information sharing within industries that could otherwise benefit from sharing such as the bar & beverage industry, special interest groups like MADD (Mothers Against Drunk Driving), the tobacco industry, and health organizations and associations.

Early prior art methods to control the verification of an individual's identity involved the use of paper ballots, and the manual entry of handwritten information from these paper ballots. Using paper ballots for data collection and personnel for manual data entry. Traditional analysis of this data is conducted with spreadsheets.

Although company specific loyalty and rewards cards have been around for many years, there has been no attempt to use a standard form of

identification such as a driver's license to id ntify consumers by several companies and tie multiple company specific customizable messages, such as GOOD CUSTOMER or BANNED FROM THIS STORE, to each. Furthermore, there is currently no way to easily set flexible rewards in varying degrees of granularity down to a consumer specific level.

There is also a problem of identifying "double dippers" or multiple people trying to get restricted access using a single piece of identification or multiple copies of the same piece of ID. Existing methods rely on the person responsible for ensuring restricted access to identify "double dippers".

As well, capturing email addresses has been a relatively tedious task. It has been typically accomplished in the past by collecting email addresses using paper ballots. Also, paper ballots have been used to capture consumer info. In instances where consumers were eligible to win a prize for providing the ballot information the prize was awarded simply by putting all the ballots in a box and randomly drawing one to select the winner.

What is needed is a way to collect demographic data efficiently on a mobile computer in a manner that minimizes the data entry time. Currently, demographic data is largely collecting using paper based systems. In cases where mobile computers are used, the process of entering data is very time consuming. What is needed is a method of authenticating the contents of identification cards so that any access to a product or service having an age requirement is satisfied at the time of access in a quick and convenient manner, to safeguard businesses and others against the penalties that may otherwise be encountered from the use fraudulent identification cards.

For the foregoing reasons, there is a need for an improved method and system for personal identification authentication.

Summary of the Invention

The present invention is directed to a system and method for the capture, storage and manipulation of remote information. The system includes at least one remote information capture device located at a remote site for capturing remote data, a central database accessible by the remote capture device for storing the captured remote data, and a computer program operative to manipulate the captured data.

In an aspect of the present invention, at least one capture device includes a bar code reader. In an aspect of the present invention, at least one capture device is a wireless device to enable operator mobility. In an aspect of the present invention, the remote information is patron data. The method includes the steps of capturing remote data, storing the captured remote data, and manipulating the stored data.

Venues and businesses have the ability to demonstrate not only compliance with legislation but good corporate governance with being able to display and effect due diligence proof, therefore benefiting their best business practices but also their proactive approach that they can then leverage into good public relations within the community. The invention is easy to use for untrained data collection labor. There is a high rate of consumer data collection ability of the units as well as the ability to quickly and cost effectively display the captured data to the clients management team in a more timely manner than the paper ballot system.

The invention enhances the profitability, cost effectiveness, efficiency, and quality of the ID experience for customers of the verifier and the identity verification products and services community. The invention can incorporate loyalty and rewards programs. Administration is quick, simple and done on an automated basis enabling costs to clients to be kept as low as possible. The data provides detailed and accurate information on the target market

accounting of charges relative to the data requested, thus the mountains of support documentation clients received through alternative channels previously are no longer needed. It can become so simple that the acceptance and transmission of the data becomes the invoice and authorization for payment.

Verifiers and other potential clients can take advantage of this simplified, yet very effective, process for their identity verification products and services requirements. A verification is performed, the data downloaded, supported by 1d and 2d reading to ensure accuracy, which in turn is posted on the exchange providing accurate information making it easy to receive data and thus allocate advertising resource dollars more efficiently and cost effectively.

Other aspects and features of the present invention will become apparent to those ordinarily skilled in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

Brief Description of the Drawings

These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and accompanying drawings where:

Figure 1 is an overview of an ID authentication system in accordance with the present invention;

Figure 2 is an overview of an ID authentication method in accordance with the present invention;

Figure 3 illustrates a handheld device in accordance with an embodiment of the present invention;

Figure 4 illustrates an information capture screen;

Figure 5 illustrates an e-mail manipulation screen;

Figure 6 illustrates a signature capture screen;
Figure 7 illustrates customizable survey questions with drop down lists;
Figure 8 illustrates an email invitation;
Figure 9 illustrates an event response status window;
Figure 10 illustrates a customer information window;
Figure 11 illustrates an event analysis window;
Figure 12 illustrates a sample demographics report window;
Figure 13 illustrates a manual entry general information screen;
Figure 14 illustrates a manual licence number entry screen;
Figure 15 illustrates a first name screen;
Figure 16 illustrates a last name screen;
Figure 17 illustrates a details summary screen;
Figure 18 illustrates "Tap to Win!" contest screens;
Figure 19 illustrates a photo info screen;
Figure 20 illustrates consumer names being displayed;
Figure 21 illustrates only the winner's name shown; and
Figure 22 illustrates manual consumer data capture screens.

Detailed Description of the Presently Preferred Embodiment

The present invention is directed to a system and method for the capture, storage and manipulation of remote information. As illustrated in Figure 1, the system 10 includes at least one remote information capture device 12 located at a remote site for capturing remote data, a central database 14 accessible by the remote capture device 12 for storing the captured remote data, and a computer program 16 operative to manipulate the captured data.

In an embodiment of the present invention, at least one capture device 12 includes a bar code reader. In an embodiment of the present invention, at least one capture device 12 is a wireless device to enable operator mobility. In an embodiment of the present invention, the remote information is patron

personal and preference data. In an embodiment of the present invention, the remote capture devices 12 include wireless LAN and/or WAN-enabled units that can communicate with the central database 14 in real time over the Internet. This eliminates the need to dock the unit in a cradle to dump the data to the central database 14.

As illustrated in Figure 2, the method includes the steps of capturing remote data 102, storing the captured remote data 104, and manipulating the stored data 106.

TABLE 1: Reference No. Information

112	JURISDICTION (U.S. (STATE) OR CANADA (PROVINCE))
114	GRAPHIC OR LOGO OF JURISDICTION
116	DOCUMENT TYPE
118	NAMES AND ADDRESS OF INDIVIDUAL OF THE DOCUMENT
120	PARTICULARS OF THE INDIVIDUAL OF THE DOCUMENT
122	SIGNATURE OF INDIVIDUAL OF THE DOCUMENT
124	PHOTOGRAPH OF INDIVIDUAL OF THE DOCUMENT
126	IDENTIFICATION NUMBER OF DOCUMENT
128	DATE OF BIRTH (DOB)
130	US128 BAR CODE
132	MAGNETIC STRIP
134	ANSI-20.1; 1993 CHARACTER SET OR 2D BAR CODE PDF-417
136	JURISDICTIONAL TEXT

TABLE 2: Information Captured

- License Number
- Name (First, Middle & Last)
- Date of Birth
- Sex
- Address, City, Province, Postal Code
- Height / Weight
- Hair Color / Eye Color
- License Expiry Date

Email Address

- Entry Keys Provided for:
- Backspace
- Clearing the Entry
- First Name
- Last Name
- Toggling Domains

Team members use the hand-held units to collect information on a consensual basis from driver's licenses of patrons at the bar. They also collect email addresses and responses to survey questions, such as: How many beers a week do you drink on average? What is your primary beer brand preference? What University/College do you go to, if any? At the end of the event, the team leader connects the unit to a phone line and the data is transferred in encrypted form to back-end servers over a dial-up Internet connection. While the unit is connected, any program updates are automatically conducted. With the data residing on servers, the team leader then logs on to a relevant section of the site and creates a new event to which the data is assigned. Analysis can then be conducted on this data specifically or the whole data set collected to date. For example, the team leader can

view the responses and other statistics by event type, such as Blind Data Promotion or event tickets giveaways, and/or location.

The system can be used in a similar fashion for other markets like automotive dealerships, real estate agents for open houses, or energy savings corporation representatives. The invention provides an age verification information product and their related loyalty and reward program data mining. The invention facilitates the capture of bar code and magnetic stripe age verification data from mobile readers. The invention can be expanded to become a gateway to gather consumer information, conducting field survey and gathering email addresses will allow a company to offer a far greater range of meaningful services to target clients. The various age-verification and data collection can virtually remove the possibility of human error in authenticating ID's while ensuring the accuracy and quality of data collected. The hand held wireless devices can track specific data that can be shared by appropriate parties through secured Internet communications.

In an embodiment of the present invention, the system includes a handheld unit that uses a docking cradle to upload captured information into the remote hosted database while using a proprietary software application, providing is a tool for cost effective, real-time communications of related functions and delivery of all reporting necessary to satisfy client needs, and provide a data collection gateway into customer initiatives including loyalty and reward programs for many industries such as breweries and tobacco companies. As through traditional loyalty programs, points or other special offers, can be awarded based on frequency of purchase and/or other criteria. These offers are tied to their unique ID or driver's license number enabling through one-to-one marketing. This will provide valuable information that to date has been virtually impossible to acquire. The invention facilitates the gathering, storing, management and representation of this information while respecting the requirements of both consumers and other regulatory as well

as legislative standards by securely hosting the customer's collected data on servers.

The invention can significantly lower direct marketing costs through the use of the database information to target demographic specific customers, and provide a full loyalty and rewards program database management system. The invention establishes new innovative initiatives to reduce the overall cost of identity verification for nightclub establishments by establishing a uniform policy on entrant ID verification, and ease of verification and authenticity of same for the first time creates a more efficient and productive business model for the establishment. No more guessing at the authenticity or validity weight of an ID.

By utilizing a verification system, bars are able to conduct a customer appreciation direct mail campaign. Internet-based software facilitates the introduction of data-exchange for the purposes of direct mail and electronic mail marketing programs. A customer data list including complete driver license information can be collected for tens of thousands of patrons. Nightclubs are able to gather data on these patrons and identify those that are repeat customers, and run direct mail campaigns to these customers.

Additionally, security personnel of a club can use the date and time stamped patron data collected to assist police in identifying alleged assault perpetrators as well as assist police fraud squads and credit card company security to identify credit fraud rings. In tests involving over 200,000 driver's licenses, the multiple results achieved in age authentication and verification have lead to hundreds of confiscated false ID's, patron data collected on an opt in/out permission base and enhanced ability for the security personnel to track club patrons on a dated and time stamped basis.

Challenges faced by brewers with a target demographic are twofold: one, the collection of customer data was traditionally conducted using a labor-

intensive paper ballot system and s condly, the demographic target has a tendency to have identification from a residence that is not their residence during the school year and often changes form term to term therefore keeping accurate and up to date customer data is almost impossible. The invention integrates an email capture function into a portable handheld unit that is more relevant to the target demographic than a street address. Students have a tendency to keep the same email address all through their college or university years, making the task of keeping electronic addresses up to date easier than traditional addresses. Data collection teams can increase their accuracy of data collection while at the same time increasing the volume of unique customer names. Permission-based opt-in survey information and email addresses can be filtered into a back office for analysis purposes. From this database, brewers can use these addresses to promote special events called "database parties" at licensee establishments.

Several "special event" type data parties can be hosted using the system to collect and store patron information that can be later used for event success measurement purposes. The system offers businesses increased rates of data capture as with the previous system, reduced cost compared to previous systems, more accurate and reliable data collected than previous systems, and email capture on handheld unit allowing cost effective customer initiatives for transient college and university population.

If on a typically Thursday night, students make this their last stop of the night and as a result venue capacity is unfulfilled prior to 11 pm. In conjunction with the business's database, students can be invited to attend an event at a pub by email invitation sent out at 3 pm on a Tuesday night for a Thursday night promotion. The promotion can offer double their odds to win if they RSVP and in attendance by 9:30 pm Thursday night of the event. In addition, they can be put on a VIP guest list so they will not have to wait in the regular line. Upon arriving, they present their ID to the business rep and are given better odds of winning. For the first time, mail can be sent out, RSVP'd

to and attendance tracked to determine th success of the events value proposition. The capacity of the venue can be fulfilled much earlier in the evening than would normally been the case, resulting in significantly higher sales for the venue.

Information Captured:

License Number
Name (First, Middle & Last)
Date of Birth
Sex
Address, City, Province, Postal Code
Height / Weight
Hair Color / Eye Color
License Expiry Date
Email Address
Entry Keys Provided for:
Backspace
Clearing the Entry
First Name
Last Name
Toggling Domains
Toggling Domain Extensions such as .com, .net, and .ca
Consent
Proof of Consent
Simple Yes / No – send me information on future events / offers
Allows for signature capture
Data optimized to occupy minimal disk space

The invention enables:

System Directed Email Invitation
Clear & Simple Message
Demographically Targeted

Small Size Rich Media Text
Links to RSVP
RSVP Tracking
Event Advance Notice for:
Email Response Rate Tracking
Analysis of Event Quality
Event response status
Event Attendance Analysis
Customer Information
Event Analysis
Sample Demographics Report

While customers can capture and harvest valuable information from consumers with the intention of remarketing back to a captive audience using our core technologies, they must be able to proof proper due diligence and consent that they have received this consumer information with the consent of the person. Opt-In features and signature capture, as well as web enabled unsubscribe features help keep customers compliant and allow them to demonstrate to their brand loyalists, their desire to respect them as a customer.

The invention provides "signature capture" capability for consumer consent. Patrons will have to opt in to may choose to opt out when being surveyed so they will not receive any customer information unless they want to. Database storage is in a state-of-the-art secure facility to avoid potential data theft/hacking. Data is captured by & belongs to customers, it is their responsibility to comply with privacy legislation with how they collect, host and use the data collected.

The invention can provide special event database capture, and the required tools for the aforementioned industries in order to meet tactical needs to enhance, maintain and acquire new brand or product loyalists.

These tactical needs can be fulfilled by the capture, integration into CRM initiatives and the ability to leverage this information and technology to further drive consumer loyalty through event participation and value offerings.

The invention has the ability for businesses to reach consumers through customer communications and through special offers entice consumers to fill out online surveys so that businesses can gauge the relevance, results or required improvements to enhance the continued success of ongoing and future promotions and product offerings.

In today's marketplace all companies are looking for new ways to maintain and grow their market share. This is particularly true in mature markets such as the beer industry. Beer companies for example need to use a push-pull marketing scenario. They need to have their beer "on tap" at licensed establishments and also need to convince the people visiting those establishments to order their beer instead of their customers. The invention combined with a loyal rewards program for consumers accomplishes both requirements.

The invention includes an ability of retaining patron information initially simply for responding to the issues of; verification and authentication of identification, recognizing "double dipping" as well as responding to the banned patron requirements of the hospitality industry.

Other Uses for the invention include:

- Automotive dealers for rapid capture of driver's license information, verification, database development, test drive tracking and new service customers in order to facilitate more cost effective communications as well as offering the ability to rate their customer experience and drive valuable feedback to the people determining where marketing dollars are being spent as well as improved overall communications with their existing customer base.

- All retail establishments involved in the sale of alcohol products (LCBO in Ontario for example)
- All retail establishments involved in offering internal credit facilities to their customers.
- Consumer Home Shows
- Home Delivery of ID sensitive or Age restricted Products and services
- Car Rental Agencies
- Parking Control
- Service to the long haul companies allowing backend verification of all driver's against the MTO database once per year.

The invention provides the following customer requirements for capturing consumer data:

Portable Handheld Data Collection Unit Software Applications:

a) Embedded consumer information on Identification found on the bar code or magnetic stripes on ID's such as a Driver's Licenses.

b) Consumer consent either by a simple yes / no or signature capture for due diligence proof of consensual consumer opt-in for Customer Relationship Management (CRM) initiatives.

c) Surveys are conducted using the handheld devices so our customers can get immediate filed response from consumers.

d) Collect email addresses or telephone numbers

e) Dial up and uploading of data collected using a dial up internet account to our back office servers

Back office software applications allow our customer:

a) Review the aggregate or specific information collected in the filed by:

a. Demographic information

b. Survey data collected

b) Conduct on line surveys with consumers.

c) Send rich text emails targeted to their customers specific requests for upcoming event information

d) Invite customers to special events or offer other special promotions

e) Track RSVPs of special offer or event invitations

f) Track special offer or event attendance as well as event attendance relative to RSVPs

3. ASP Revenue

Secure Hosting of Collected Data

Revenue is based on the rental of hosted services for housing data collected in the field using the portable handheld date collection unit.

a) Outsourced management of hardware

b) Outsourced management of software

c) Outsourced management of security relating to collected data

d) Dial up accounts as an upload gateway to the back office servers

e) Various levels of access to information collected from the end consumer, company field representatives, territory managers to senior management and sales and marketing staff.

f) Electronic rich text email is an option to be used with the back office services

g) CRM initiatives can be remotely managed using our hardware and software combinations for electronic direct mail marketing

h) Web sites – Internet, Extranet and Intranet sites can all be maintained on this system for our customers.

i) Opt-in & Opt-outs – Customers will be able to use this service so they can keep their mailing lists up to date as well as compliant with the wishes of their customers as well as compliance to regulatory and legislative requirements

j) Data base sweeping services – services such as this are offered to our customer for use so they may contact third parties whether they are government or private sources of obtaining current and accurate data relative to their consumer data base I'd characterize this as an "accuracy" service since holders of personal information have a responsibility to maintain accurate information. "sweeping service" again smacks of data mining. His isn't so much an issue as to what you're doing but how it is characterized.

This service will help the "holders" of the personal information to maintain the accuracy of their information holdings.

k) Loyalty and Rewards Programs – Systems such as this may be used by our customers. These systems offer value to consumers for being brand loyalists and maintaining their loyalty to the brands

l) Redemption and Auctions – As an augmentation of the Loyalty an Rewards programs, our customers may be able to use this system whereby their consumers can redeem prizes or special offering based on value offered and received and or time related special offers and

1. A scratch and win, having an algorithm that allows for better odds for loyal patrons.
2. Manual name and license number entry for jurisdictions that do not have bar codes or magnetic stripes.

Capturing License Data

Data is captured from the encoding on license identification to:

1. Determine the authenticity of the ID by checking the encoding.
2. Provide data to validate against:
   a. The information printed on the ID
   b. The bearer of the ID.
3. Quickly and accurately record the information contained on the ID.

Three different types of encoding are typically used on driver's license identification. Each encoding standard can be easily identified -- many jurisdictions use more than one form of encoding on identification. Each encoding standard has different data storage requirements and capacities. Provided consent, the encoding format with the highest storage capacity should be used as the source for the information that you capture - some encoding formats may not contain all the information that you require. The

following is a prioritized list of the typical encoding formats in decreasing order of storage capacity; 2D Barcode, 3-Track Magnetic Stripe and 1D.

The bar code reader can read 1D bar-coded licenses. However, so little information is stored in the 1D barcode that it can only accurately aid in determining the authenticity of the encoding. In order to capture the required information, one must use manual data entry instead of scanning the 1D barcode.

As illustrated in Figure 13, to add a license manually, simply press the General button. For each of the fields, a drop-down list is provided to aid the data entry process. Navigation: Pressing the General button from the General Info screen, aborts the manual license entry operation and returns you to the main ID screen. In general, the Next and Previous buttons located at the bottom of the hand-held unit are used to navigate through the Manual License Entry screens. However, pressing the Previous button in the General Info screen does nothing. Pressing the Details/Save button from this screen will take you to the License Number screen, illustrated in Figure 14, if a license number has not been entered; otherwise it will take you to the Details Summary screen, illustrated in Figure 17. Once you have filled in all the data fields on the General Info screen by selecting an item from each of the drop-down lists, press Next to proceed.

Use the stylus and keypad to enter the license number. Recheck entry to ensure properly differentiated letters and numbers, in particular 1's and I's, 0's and O's, and 5's and S's, on the license. Navigation: Tapping CLR on the keypad will clear all information entered in the data field. Tapping BS once on the keypad will erase the last character entered in the data field. The BS key functions similar to the Backspace key on a regular keyboard. Pressing the General button from this screen will take you to the General Info screen. Pressing the Details/Save button from this screen will take you to the Detail

Summary screen provided that you have finished ntering the license number. Press NEXT to proceed to the First Name entry screen.

Use the stylus and keypad to enter the patron's First Name. As you begin typing, you will notice the scroll list looking for a match from a list of common names based on the letters you have typed. If, as you type, you see the completed name in the scroll list you can select the name by tapping twice on it in the scroll list to populate the First Name field. Recheck your spelling with the information printed on the patron ID. If the information is cannot be easily read, ask the bearer of the ID to assist you.

Navigation: Pressing the General button from this screen will take you to the General Info screen. Pressing the Details/Save button from this screen will take you to the Detail Summary screen. Press NEXT to proceed to the Last Name entry screen. The Last Name entry screen operates in the same manner as the First Name entry screen, as illustrated in Figure 15. Navigation: Pressing the General button from this screen will take you to the General Info screen. Pressing the Details/Save button from this screen will take you to the Detail Summary screen. When you are finished entering the Last Name, press Next to proceed.

The final screen in the manual entry process is the Details Summary screen, illustrated in Figure 17. All information entered during the current manual entry session is displayed for review. If you need to make any changes, use the Previous and Next buttons at the bottom of the unit to move through the screens. When you are finished editing, if required, press the Details/Save button to go to the Details Summary screen. Review the information again, and then press the Details/Save button to save the license data. Navigation: Pressing the General button from this screen will take you to the General Info screen.

"Tap to Win!" Contests

As illustrated in Figure 18, to launch a "Tap to Win!" contest, press either of the buttons labeled "Tap to Win!" from the main ID screen. The "Tap to Win!" screen is displayed. Using the stylus, tap "Tap to Win!" The result is displayed on the screen. Pressing any one of the "Tap to Win!" buttons will return you to the main ID screen.

Awarding prizes based on operator defined odds. For example, a beer company might have 10 t-shirts to give away at an event and the attendance may be 100. In this case, they would want to set the odds to one in ten to be statistically confident that they can give every attendee a chance of winning.

The odds can be reconfigured at any time. With a paper based system, once the tickets are printed, the odds cannot be changed. The look and feel of the scratch ticket can be easily customized. The operator only has to have a single mobile computer instead of hundreds of scratch tickets. Since the consumer "scratches" the ticket on the mobile computer, fraudulent winning tickets cannot be created.

A mobile computer is used to award the prizes based on operator-defined odds. Prior to application startup, the operator will type in the odds. Once the application is running screen(s), it can be used for the prizing. As illustrated in Figure 18, the operator would tap in the black rectangular area of the first screen and then depending on the odds and whether that person won or not, either the second or third screen would be shown.

The Invention provides advantages including:
Fulfills Regulatory compliance with ID verification initiatives
Captures consumer information assisting in their CRM initiatives
Assists them to:
Maintain and increase market share
Increase profitability through brand loyalty marketing
Enhance existing marketing initiatives

Imm diate Analysis of and availability to the data gen rated by their Marketing efforts
Customer management done online
Small portable unit
Easily connected to the Internet for back Office data analysis
Identifies "double-dippers"
Maintains a banned / VIP list or custom messages
Customer survey support
Integrated bar code & magnetic Stripe reader
Email address capture
Signature capture
Large data storage capacity

- The invention facilitates single source communications and marketing of all age verification related management services
- Capture strategic information from consumers for clients to leverage their advertising, marketing, CRM and loyalty and reward program strategies
- Use Strategic Alliances to enable rapid deployment of new products

Venues and businesses have the ability to demonstrate not only compliance with legislation but good corporate governance with being able to display and effect due diligence proof, therefore benefiting their best business practices but also their proactive approach that they can then leverage into good public relations within the community. The invention is easy to use for untrained data collection labor. There is a high rate of consumer data collection ability of the units as well as the ability to quickly and cost effectively display the captured data to the clients management team in a more timely manner than the paper ballot system.

The invention enhances the profitability, cost effectiveness, efficiency, and quality of the ID xperience for customers of the verifi r and the identity

verification products and services community. The invention can incorporate loyalty and rewards programs. Administration is quick, simple and done on an automated basis enabling costs to clients to be kept as low as possible. The data provides detailed and accurate information on the target market accounting of charges relative to the data requested, thus the mountains of support documentation clients received through alternative channels previously are no longer needed. It can become so simple that the acceptance and transmission of the data becomes the invoice and authorization for payment.

Verifiers and other potential clients can take advantage of this simplified, yet very effective, process for their identity verification products and services requirements. A verification is performed, the data downloaded, supported by 1d and 2d reading to ensure accuracy, which in turn is posted on the exchange providing accurate information making it easy to receive data and thus allocate advertising resource dollars more efficiently and cost effectively.

- Accurate and efficient capture of industry-specific personal consumer data in a manner which complies with industry/geographically-specific privacy legislation
- Rapid transfer of such data to data storage
- Electronic use of such data for industry-specific loyalty/rewards programs
- Electronic use of such data to drive consumers to desired locations
- Electronic analysis of target consumer demographics and effectiveness of loyalty/rewards programs
- Speed and accuracy of data capture
- Secure data transmission to data storage
- Online analysis of data
- E-marketing engine for contacting client's customers

- Management of customer profile by establishment

Global Rules

Embodiments of the present invention can further include a system for rewarding and identifying customers based on flexible rules for mobile computers utilizing the management of customer profiles by an establishment. The system can provide a mobile electronic means of identifying particular consumers based on an encoded form of identification with a operator customizable message and rewarding such consumers with flexible criteria.

Although company specific loyalty and rewards cards have been around for many years, there has been no attempt to use a standard form of identification such as a driver's license to identify consumers by several companies and tie multiple company-specific customizable messages, such as GOOD CUSTOMER or BANNED FROM THIS STORE, to each. Furthermore, there is currently no way to easily set flexible rewards in varying degrees of granularity down to a consumer specific level. For example to set the rule that any consumer who comes into the store between the hours of 4PM and 4:30 PM and is a female between 5'-5" and 5'-8" tall from a particular city will get 10% off their purchase.

Each company using the system will have an account online which will allows them to:

- Associate a particular main and supplemental message (e.g. VIP, Frequent Visitor or BANNED, Bad credit) with a particular consumer
- Create flexible rules (e.g. Any consumer who comes into the store between the hours of 4PM and 4:30 PM and is a female between 5'-5" and 5'-8" tall from a particular city will get 10% off their purchase)
- Upload the rules and consumer specific messages to the mobile computer over the Internet.

Once the mobile computer has the list of consumer specific messages and the appropriate rules loaded, the hand-held computer will identify any consumers to whom a customizable message has been assigned or who are eligible for the rewards defined by the rules. Each time a piece of ID is processed by the mobile system, a time stamped record is stored on the unit. This data is then uploaded to a central server the next time the mobile computer is connected to the Internet so that a history of consumer rewards or denials can be tracked.

Advantages include:

- Multiple companies can use same encoded card to identify and reward consumers
- Flexible rules can be created online and uploaded to the mobile computer verifying the IDs
- By allowing multiple companies to use the same ID card, state or country wide banned lists can be used
- A digital record is kept of the consumers as their ID is processed by the mobile computers thereby tracking consumer reward/denial history

Double-Dipping

Embodiments of the present invention can further include a system for identifying multiple attempts to utilize a single piece of identification to gain access controlled by a mobile computer. The system provides a solution to the problem of identifying "double dippers" or multiple people trying to get restricted access using a single piece of identification or multiple copies of the same piece of ID.

A hand-held computer will be used at the restricted entrance to verify the IDs. Each time an ID is processed, the computer determines whether someone has already been admitted to the restricted area by using that ID and if so, denies access. When a person leaves the restricted area, the ID is scanned and removed from the internally stored list of IDs in the restricted

area so that the ID can subsequently be used to gain access without being denied. An algorithm stores the IDs that have been processed and compares any new IDs to those processed.

Advantages include:

It takes the guesswork out of the process. By electronically identifying multiple attempts to use the same piece of ID, the process is essentially foolproof and consistent.

Efficient Email Capture

Embodiments of the present invention further include a method of capturing consumer email addresses in an efficient way using mobile computers. As illustrated in Figure 5, one can either enter the email address directly by clicking on the appropriate characters or you can use the following buttons to speed up the data capture process:

FN - Clicking this button inserts the patron's first name as read electronically from the ID card.

LN - Clicking this button inserts the patron's last name as read electronically form the ID card.

TD - This button allows you to toggle between some common domain names. As you click it, the domain cycles through the list of standard domains.

TE - This button allows you to toggle between some common domain extensions such as .com, .net, .ca. As you click it, the domain extension cycles through the list of standard extensions. The following buttons can be used for clearing data:

BS – This is the backspace key and deletes the previous character

CLR – This button clears the entire email address entry

Advantages include:

The mobile computer allows for the data encoded on 1D/2D bar codes or magnetic stripes of various forms of identification to be read. As such, the

consumer's first nam and last name will typically be known by the time th email capture screen is loaded thereby eliminating the need to re-enter the name if it forms part of the email address. In addition, the user interface has been designed such that the other portions of the email address can be captured with a couple of clicks. The functionality of the screen is also highly conducive to use on web pages and other forms of electronic media where it can be packaged as an ActiveX control.

Multimedia Presentation involving Consumer Data Captured with Mobile Computers

A visually appealing means of selecting a random winner from a group of consumers who have provided their personal and preference data as captured using mobile computers.

- Winner selection process is electronic and more visually appealing for the consumers
- Since the consumer data was captured electronically, there will not be an issue of illegible details on the winner, which would make verifying the winner virtually impossible

The consumer personal and preference data is captured using hand-held computers. Whenever possible, the data encoded on driver's licenses is read to speed up the data capture process. When the random draw is to be performed, the mobile computer is docked to a notebook computer and the names transferred over. An application on the notebook machine then generates the list of consumer names along with the winner's name. This data is then used by a flash presentation that is displayed on a plasma screen connected to the notebook. The flash presentation appears as illustrated in Figures 20 and 21.

Figure 21 illustrates consumer names being read and displayed. When all the names have been loaded, the names of the consumers who have not been chosen as the winner begin fading until only the winner's name is shown, as illustrated in Figure 21.

Capture and online presentation of consumer photographs linked to driver's license data

The invention can take digital photos of consumers and tie those images to one or more consumers whose personal and preference data has been captured. Previously, the digital images could not be referenced to one or more consumers. The invention provides a digital means of connecting one or more consumers to a digital image. The user interface allows for quick association of an image with one or more people.

The operator approaches a consumer or group of consumers, takes a digital image and then individually collects their personal and preference data using a mobile computer, using the data encoded on driver's licenses wherever possible. After collection of each consumer's data, the screen illustrated in Figure 19 is presented that allows the operator to associate the image number with the consumer. When a photo is taken of a group of individuals, the "Previous File" option may be used, otherwise, if it is of a single person or for a new image, "Next File" will be selected. This procedure works since the digital camera increments the image name by one each time a shot is taken. For situations where the image number is out of sync with that on the camera, the "File Number" option can be selected and the "+" and "-" buttons at the bottom can be used to set the image number so that the two are synchronized again.

The images on the camera's flash card are uploaded with the consumer data and the two are matched up based on the image names. NOTE: Before the mobile computer's application is started, a three digit flash

code as found on the camera's flash card is entered. The imag s are then renamed to be prefixed by this code to allow images from multiple cameras to be uniquely identified; otherwise two cameras may have an image called IMG_001.jpg.

Efficient Signature Capture and Storage on Mobile Computers

Generally consumer signatures are captured on paper and those that are electronically captured store the signature as an image thereby consuming a lot of disk space.

- Signatures are captured and stored electronically allowing for rapid retrieval as compared to traditional paper based signatures
- Digital signatures are stored in efficient binary format as opposed to images to conserve disk space
- Sufficient signature points are stored to preserve the cursive nature of the signatures.

A sample signature capture screen is illustrated in Figure 6. As the consumer signs, points along the signature are stored along with any instances where the stylus is returned in contact with the screen after being lifted. This data is stored in a binary file in the following format:

Number of Points (n)
X1Y1
X2Y2
.
.
.
XnYn
Index1
Index2

Index1, Index2 etc are the index of the points for which the stylus was placed in contact with the screen after a lift. For example, if Index1 is 10, that would imply that the 9th point (since the index is zero based) was one for which the stylus was returned in contact with the screen and as such should not be joined with a line to the 8th point. The algorithm that stores the signature points retrieves more points than are returned by traditional Mouse Move windows messages to allow for more cursive signatures. Once the binary file is stored, a desktop application reads the file and creates a bitmap image of the signature to allow for visualization. Storage capacity is not much of an issue on the desktop machine.

Mobile System for Efficient Demographic Data Collection

Figure 22 illustrates eight screens used to capture the demographic data. The four buttons along the bottom of each screen are used to navigate to the first, previous, next and last screens (from left to right). Each screen performs the necessary validations to ensure accurate data and minimize data entry errors.

The City, First Name and Last Name screens are pre-loaded with a list of the top 500 values appropriate to each. These values are read as the application loads from three text files. As the operator types in any of these three screens, the closest match from the list is highlighted and at any point the operator can double click on a value in the list to pop that entry into the field and eliminate having to type the whole string. Once the details have been entered, the details screen displays the data entered for verification. At this point the operator can either commit the data or move to a previous screen and correct an error.

Advantages Include:

Data is immediately stored in electronic format thereby eliminating the need to subsequently key in data as in paper based systems. Several time saving features allow for rapid data capture as compared to traditional electronic data capture techniques. Screens are designed to allow the operator to enter as much or as little information as desired.

Kiosk for Capturing Industry Specific Consumer Personal and Preference Data with or without Driver's License Data Capture

The kiosk will allow consumers to enter their personal data by having the machine read the encoded data on an identification card (data can be read from magnetic stripes, 1D barcodes and 2D barcodes). If an ID card is not available, the details can be keyed in with a keyboard along with responses to a customizable survey. The kiosk will transfer the data to a remote data store by dialing out to the Internet at scheduled times.

Although the present invention has been described in considerable detail with reference to certain preferred embodiments thereof, other versions are possible. Therefore, the spirit and scope of the appended claims should not be limited to the description of the preferred embodiments contained herein.

What is claimed is:

1. A system for the capture, storage and manipulation of remote information, the system comprising:
   at least one remote information capture device located at a remote site for capturing remote data;
   a central database accessible by the remote capture device for storing the captured remote data; and
   a computer program operative to manipulate the captured data.

2. The system according to claim 1, wherein at least one capture device includes a bar code reader.

3. The system according to claim 1, wherein at least one capture device is a wireless device to enable operator mobility.

4. The system according to claim 1, wherein at least one of the remote capture devices is a wireless LAN or WAN-enabled unit for communicating with the central database in real time.

5. The system according to any one of claims 1 to 3, wherein the remote information is patron data.

6. The system according to claim 4, further including a verifier for efficiently verifying captured data.

7. The system according to claim 4, further including a global rules manager for managing flexible rewards in varying degrees of granularity down to a patron-specific level.

8. The system according to claim 4, further including an Internet address generator for the quick generation of email addresses leveraging common extensions in combination with a captured patron name.

9. The system according to claim 4, further including an efficient signature capturer for reducing overhead when capturing patron signatures.

10. The system according to claim 4, wherein at least one capture device includes a magnetic stripe reader to efficiently capture patron information.

11. The system according to claim 4, further including an electronic marketing engine to enable electronic marketing utilizing the captured data.

12. The system according to claim 4, further including patron interface for patron participation.

13. The system according to claim 4, wherein the system further includes a fraudulent use detector.

14. The system according to claim 4, further including an electronic contest generator.

15. The system according to claim 4, wherein the system can be uploaded with one or more global rules to enhance functionality.

16. The system according to claim 4, further including means for driving customers to a web site utilizing the captured data.

17. The system according to claim 4, further including an incorporator for incorporating captured data within a multimedia presentation.

18. The system according to claim 4, further including a privacy consent selector for capturing patron approval.

19. The system according to claim 4, further including a digital camera for capturing patron photos.

20. The system according to claim 1, wherein the remote information is security rounds data.

21. The system according to claim 1, wherein the remote information is parking data.

22. A method for the capture, storage and manipulation of remote information, the method comprising the steps of:

(i) capturing remote data;

(ii) storing the captured remote data; and

(iii) manipulating the captured data.

23. A system for the capture, storage and manipulation of remote information, the system comprising:

means for capturing remote data;

means for storing the captured remote data; and

means for manipulating the captured data

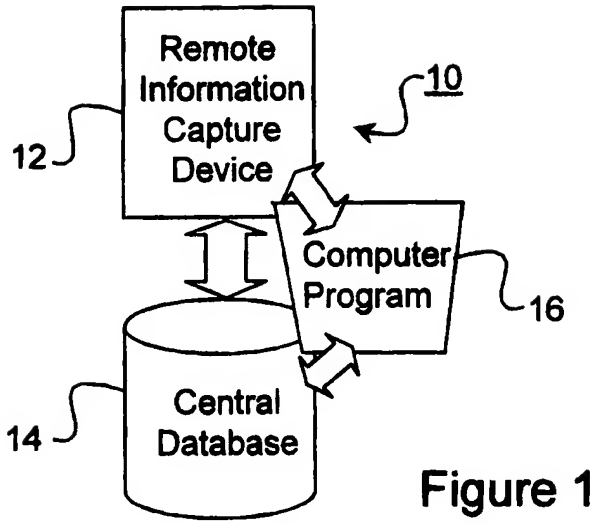

Figure 1

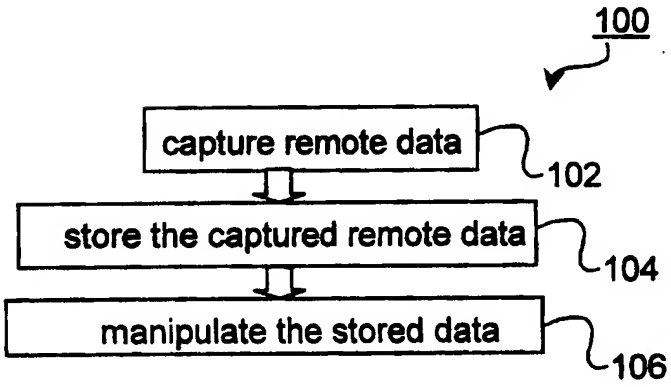

Figure 2

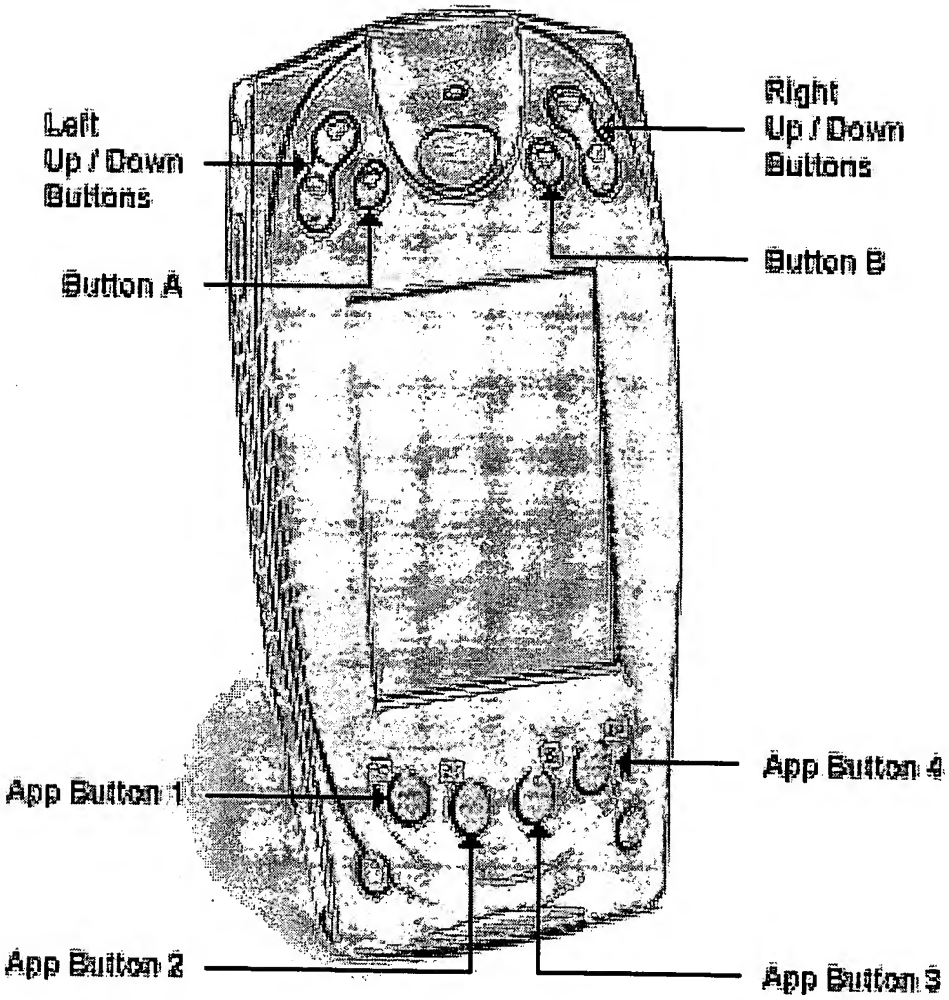
Left
Up / Down
Buttons
Right
Up / Down
Buttons
Button A
Button B
App Button 1
App Button 4
App Button 2
App Button 3

Figure 3

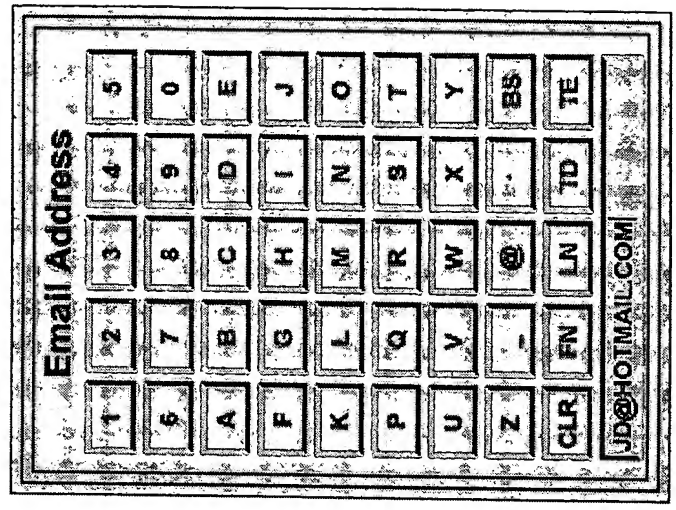

Figure 5

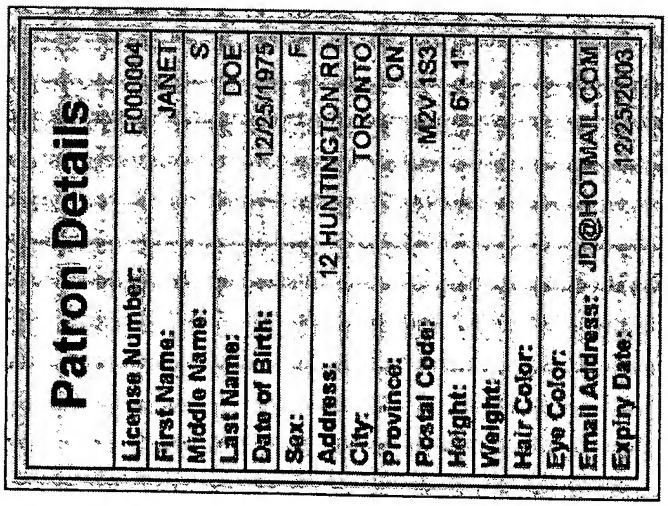

Figure 4

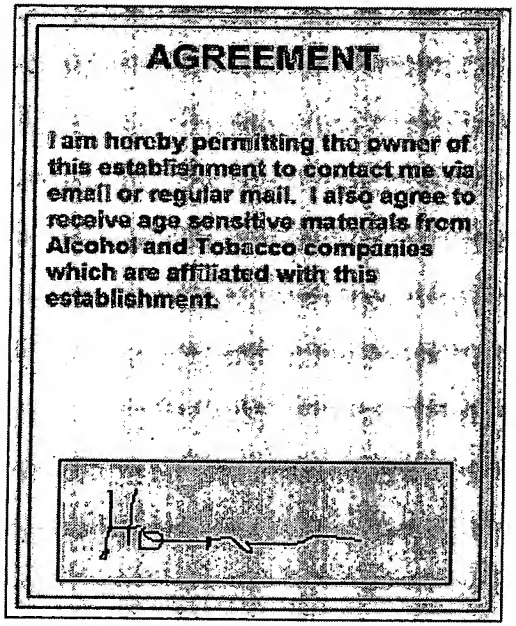

Figure 6

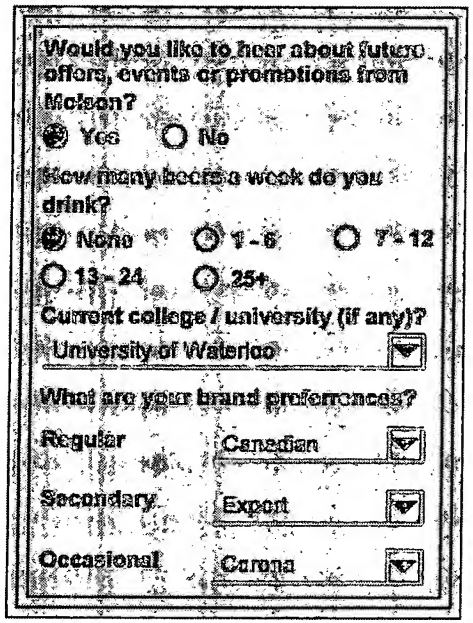

Figure 7

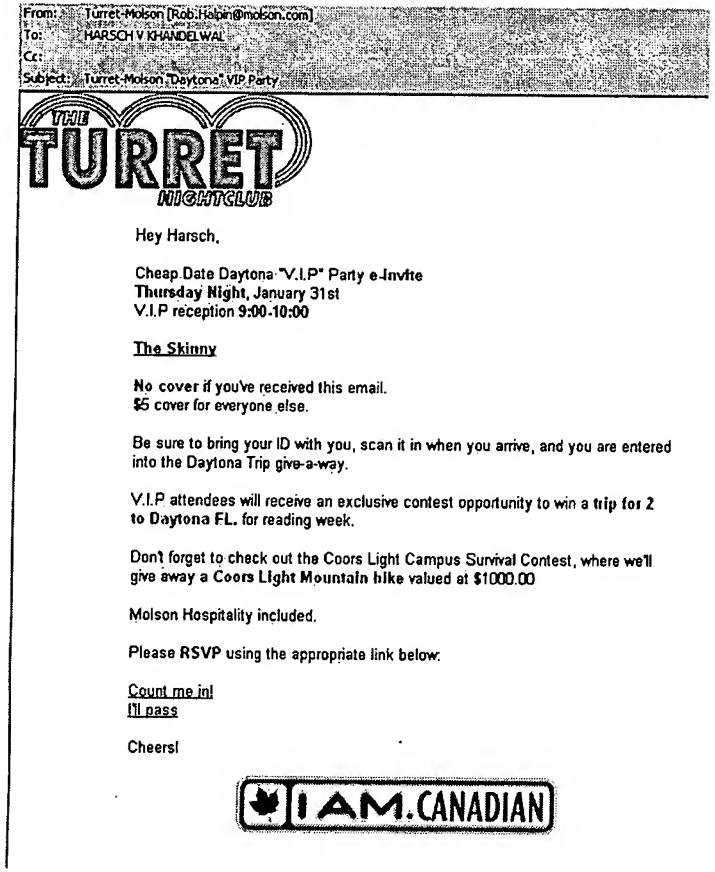

Figure 8

Event Response Status

Cheap Date Daytona

Response Summary	Total		Male		Female	
EMailed:	364		238	(65.4%)	126	(34.6%)
Responded:	122	(33.5%)	78	(63.9%)	44	(36.1%)
Accepted:	97	(79.5%)	64	(66.0%)	33	(34.0%)
Declined:	25	(20.5%)	14	(56.0%)	11	(44.0%)
Attended:	49	(13.5%)	35	(71.4%)	14	(28.6%)

Figure 9

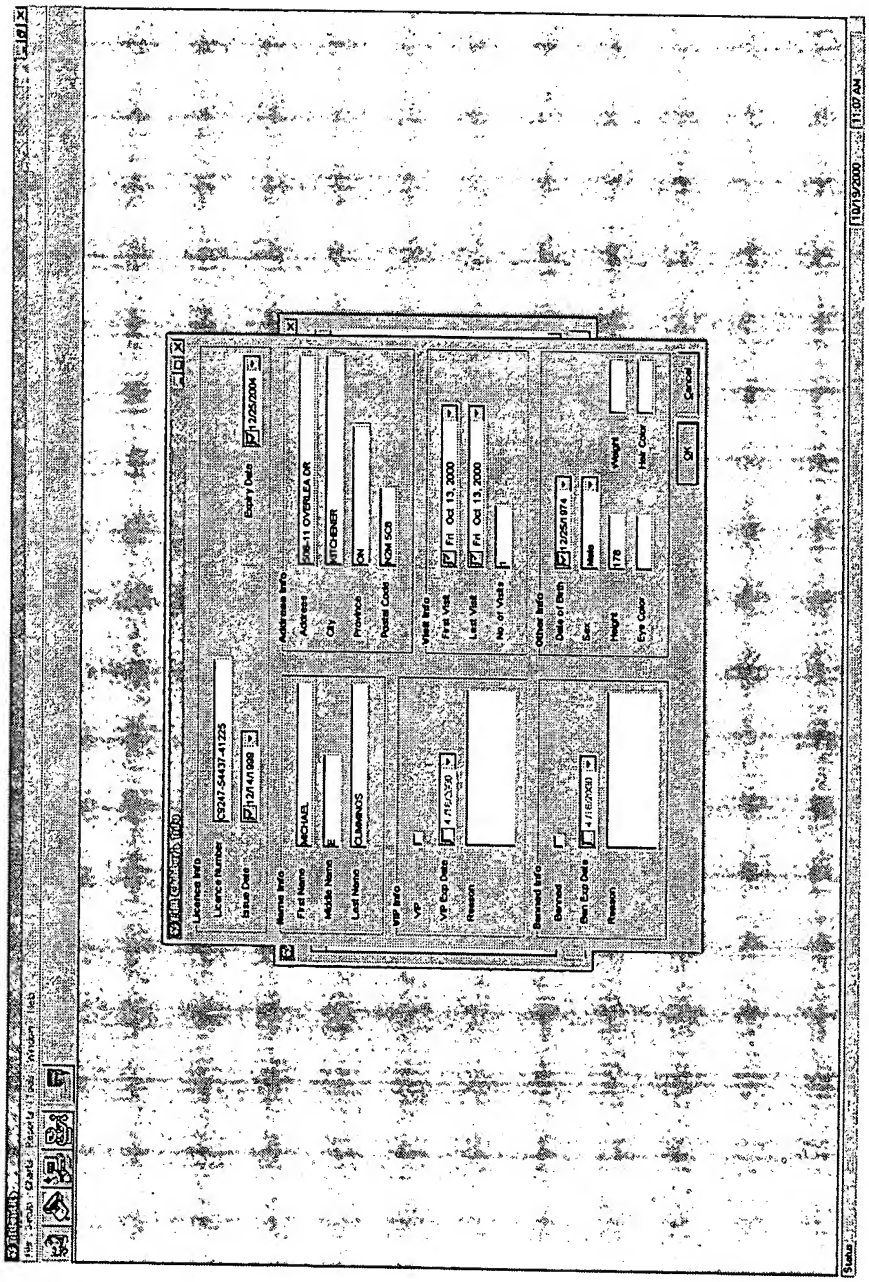

Figure 10

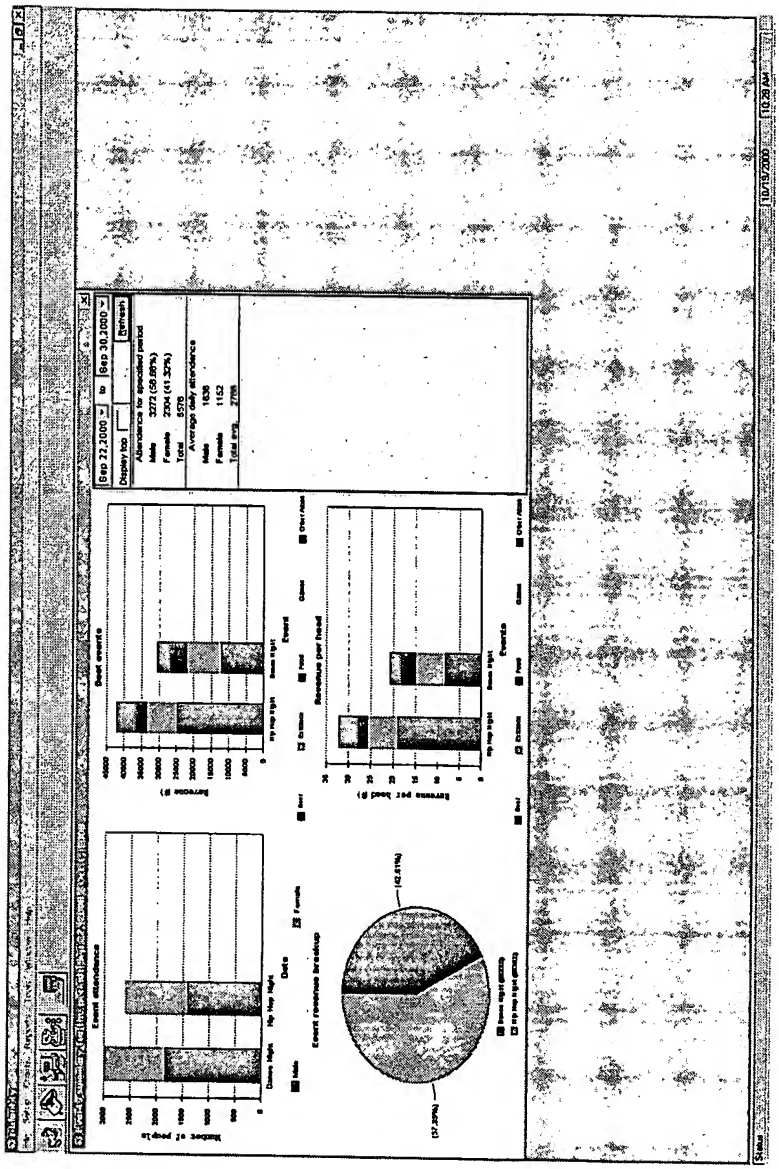

Figure 11

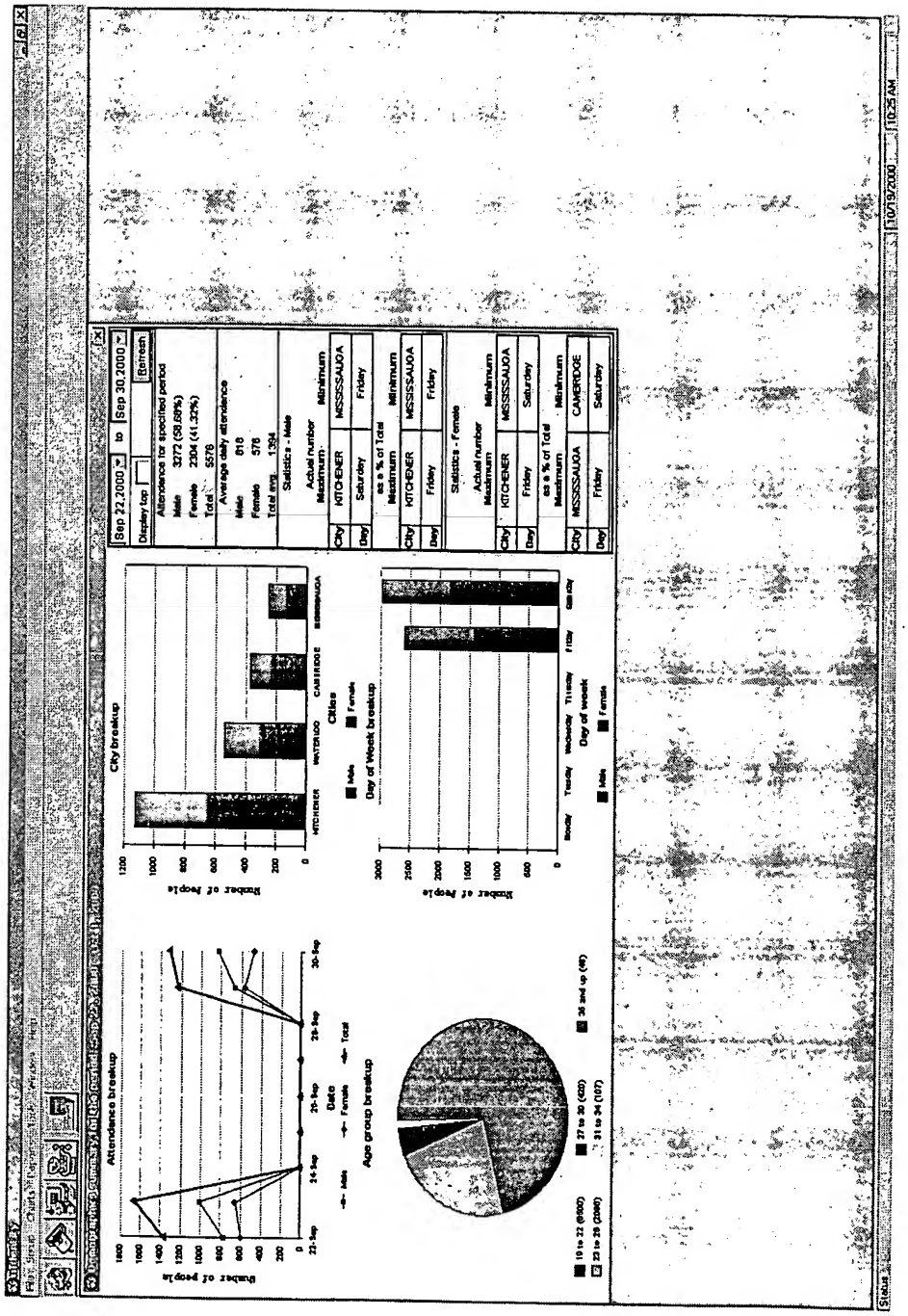
Attendance breakup
City breakup
Day of Week breakup
Age group breakup
Sep 22,2000
to
Sep 30,2000
Refresh
Display top
Attendance for specified period
Male 3272 (59.68%)
Female 2304 (41.32%)
Total 5576
Average daily attendence
Male 818
Female 576
Total avg. 1394
Statistics - Male
Actual number
Maximum
Minimum
City KITCHENER MISSISSAUGA
Day Saturday Friday
as a % of Total
Statistics - Female
Actual number
Maximum
Minimum
City KITCHENER MISSISSAUGA
Day Friday Saturday
as a % of Total
Maximum
Minimum
CAMBRIDGE
MISSISSAUGA
Day Friday Saturday
Number of People
Date
Cities
Day of Week
Age group
Male
Female
Total
10 to 22 (830)
23 to 26 (2060)
27 to 30 (430)
31 to 34 (197)
35 and up (48)
Status
10/19/2000
10:25 AM

Figure 12

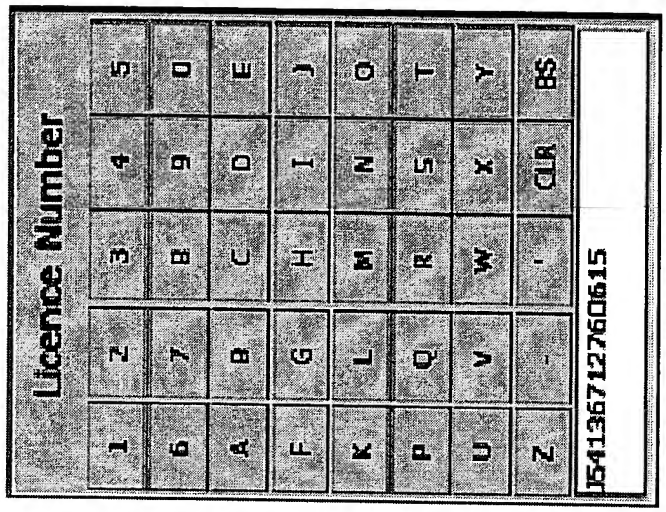

Figure 14

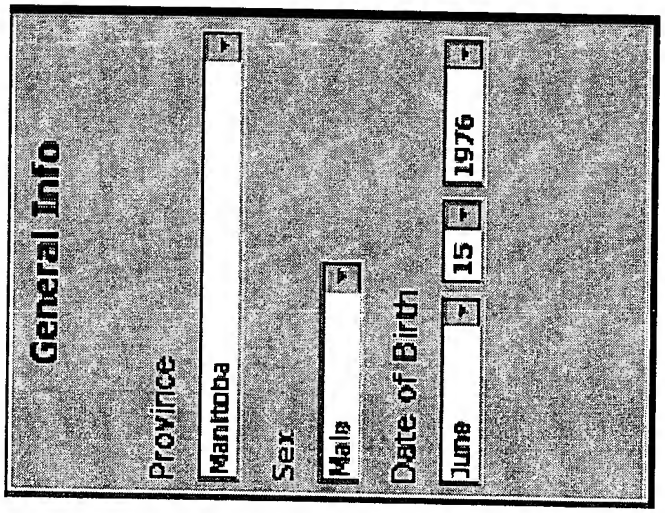

Figure 13

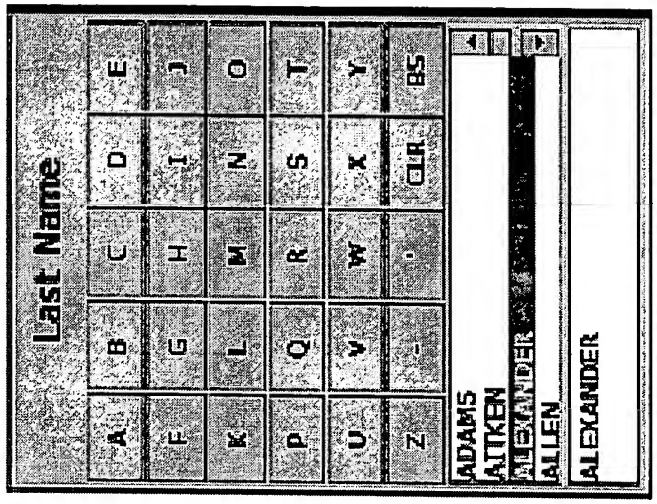

Figure 16

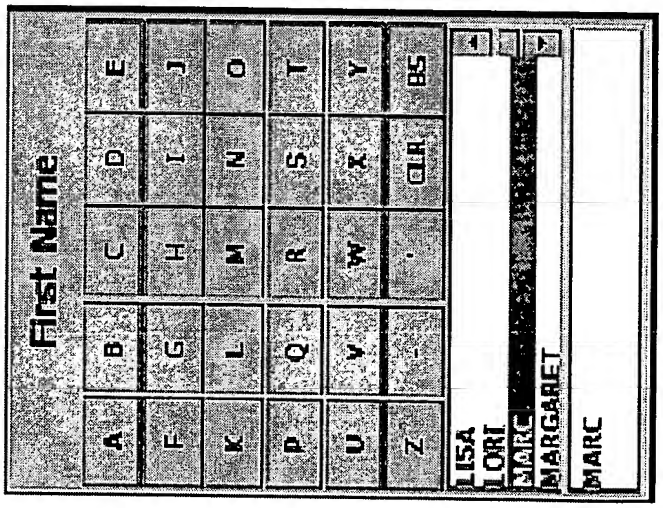

Figure 15

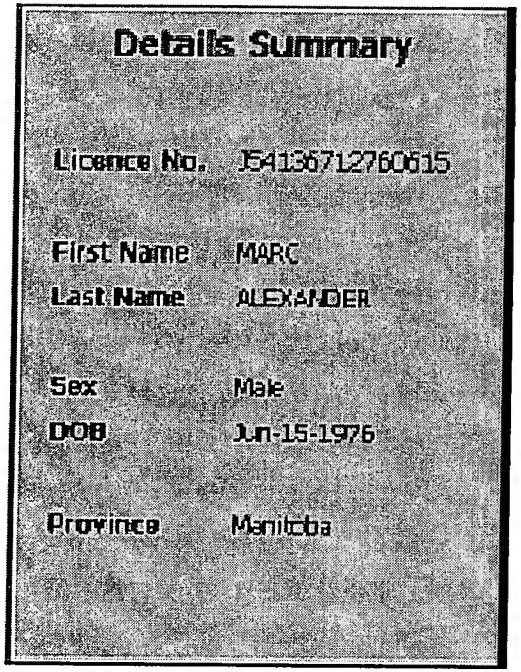

Figure 17

Figure 18

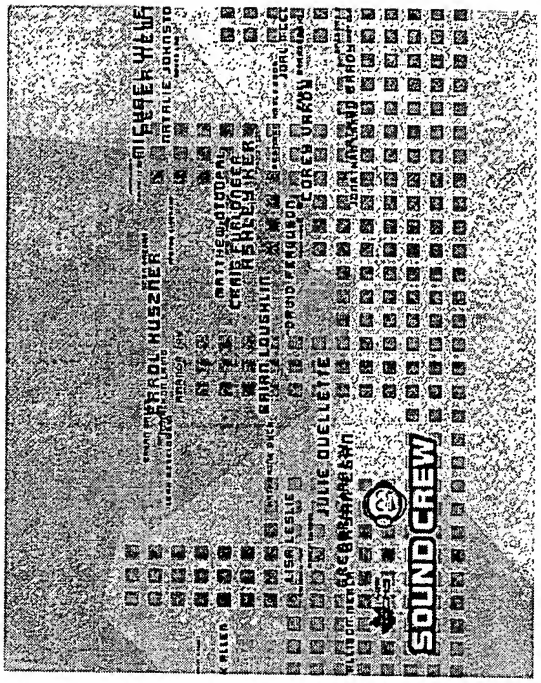

Figure 20

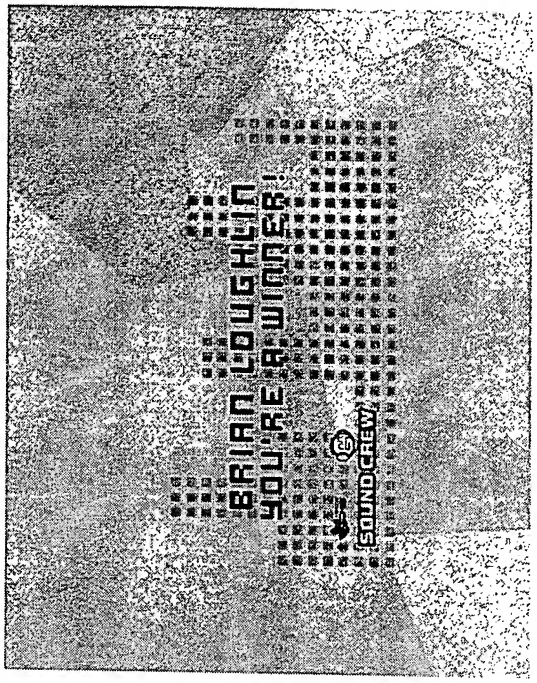

Figure 21

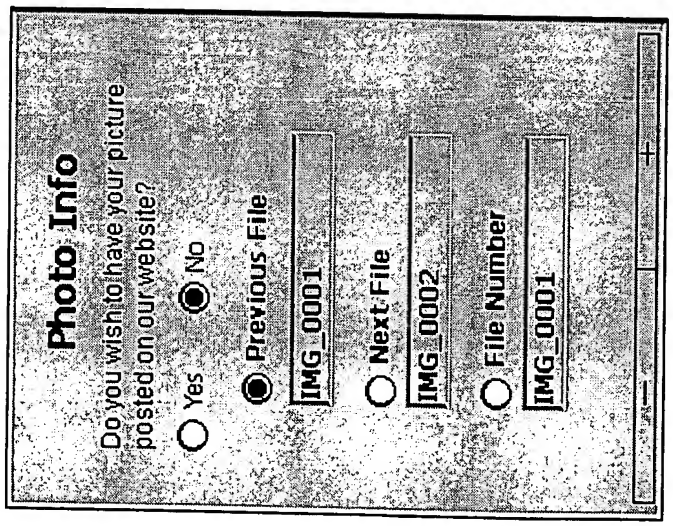

Figure 19

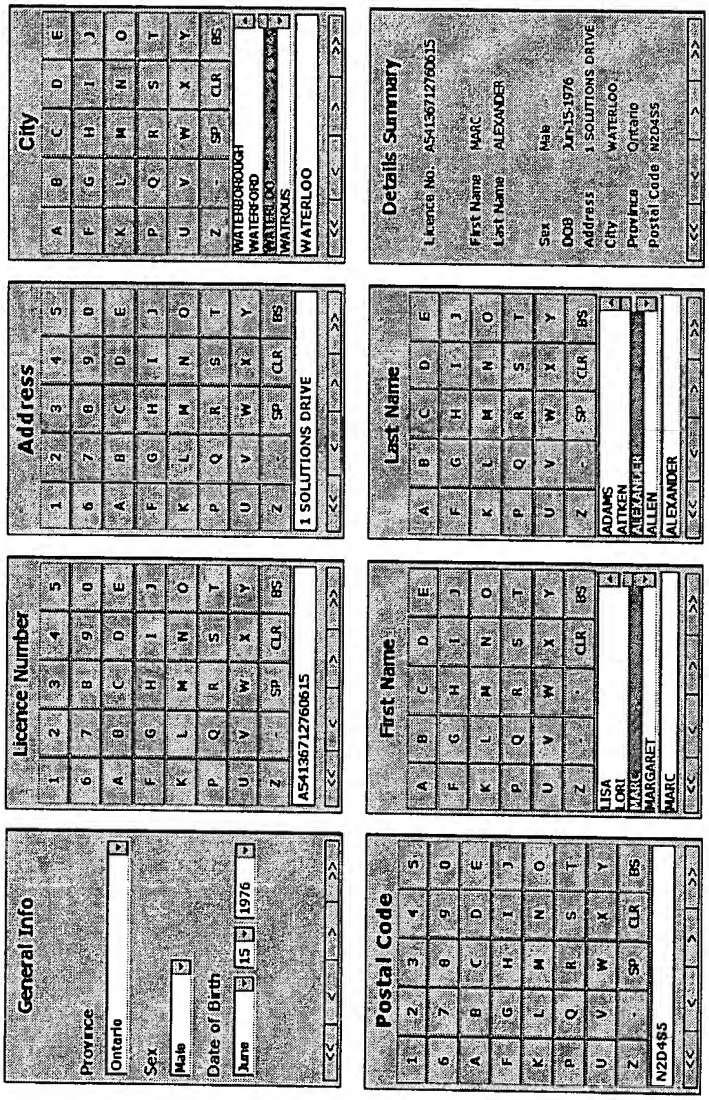
General Info
Province
Ontario
Sex
Male
Date of Birth
June
15
1976
Licence Number
A5413671276061S
Address
1 SOLUTIONS DRIVE
City
WATERBOROUGH
WATERFORD
WATERLOO
WATROUS
WATERLOO
Postal Code
N2D4S5
First Name
LISA
LORI
MARC
MARGARET
MARC
Last Name
ADAMS
AITKEN
ALEXANDER
ALLEN
ALEXANDER
Details Summary
Licence No. A5413671276061S
First Name MARC
Last Name ALEXANDER
Sex Male
DOB Jun-15-1976
Address 1 SOLUTIONS DRIVE
City WATERLOO
Province Ontario
Postal Code N2D4S5

Figure 22